UNITED STATES PATENT AND TRADEMARK OFFICE

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09/977,159	10/11/2001	Glen Alan Jaquette	TUC920010022US1	3879

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>20 December 2007</u>.
2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-18 and 20-43</u> is/are pending in the application.
   4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) <u>1-18, 20-43</u> is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All   b) ☐ Some * c) ☐ None of:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____.
      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
   * See the attached detailed Office action for a list of the certified copies not received.

DETAILED ACTION

Acknowledgements

1.   The Applicants amendment filed on December 20, 2007 is hereby acknowledged, Claims

1-18, 20-43 remain pending.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

3.   Claims 1-18, 20-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shear

et al (US PG Pub 2001/0042043) in view of O'Connor et al. (US Patent 5,745,568).

4.   As per claim 1, 10, 18 and 27, Shear et al teaches a method for accessing data in a

read/write storage medium within one of a plurality of storage cartridges mounted into a

plurality of interface devices comprising:

    providing an association of at least one coding key to the plurality of storage cartridges;

encrypting the coding key; (*see figs 1A, 1B, 1C, paragraphs 0078-0081, 0127-0138, 0183, 0193-*

0199, 0216-0220).

5.   Shear et al. does not specifically disclose receiving, by the interface devices, an

Input/Output (I/O) request; decrypting, by the interface devices, the encrypted coding key in

response to the I/O request to use to decode data to be read and code data to be written with

respect to the storage medium of at least one of the storage cartridges to perform the received I/O

request.; O'Connor et al. discloses receiving, by the interface devices, an Input/Output (I/O)

request; (at column 4, line 2 – CR-Rom access program get hardware identifier

routine)decrypting, by the interface devices, the encrypted coding key in response to the I/O

request to use to decode data to be read and code data to be written with respect to the storage

medium of at least one of the storage cartridges to perform the received I/O request.(Column 4,

lines 2-16,-- hardware identifier is used as a decryption key – then the content of the CDROM is

decrypted.).

6.   It would have been obvious to one of ordinary skill in the art at the time of the invention

to modify the Shear et al. reference in view of O'Connor et al. in order to only allows authorized

users to retrieve data from media; furthermore the combination of these elements does not alter

their respective functions, and the combination would have yielded predictable results to one of

ordinary skill in the art at the time of the invention.

7.   As per claim 2 and 28, Shear et al teach a method of using the coding key to encode data

to write to the storage medium; transmitting the encoded data to the interface device to write to

the storage medium in one storage cartridge mounted in the interface device; receiving encoded

data from the interface device read from the storage medium; and using the coding key to

decrypt the received encoded data (see figs 1A, 1B, 1C, paragraphs 0078-0081, 0127-0138,

0183, 0193-0199, 0216-0220).

8.   As per claim 3, 20, 29, Shear et al teach a method wherein the association of the at least

one coding key to the plurality of storage cartridges associates one key with the plurality of

storage cartridges, wherein the one key is capable of being used to encode data written to the

storage medium and decode data read from the storage medium of the plurality of storage

devices (see figs 1A, 1B, 1C, paragraphs 0078-0081, 0127-0138, 0183, 0193-0199, 0216-0220).

9.   As per claim 4, 21, 30, Shear et al teach a method wherein the association of the at least

one coding key to the plurality of storage cartridges associates a different key with each storage

cartridge, wherein the key associated with one storage cartridge is used to encode data written to

the storage medium and decode data read from the storage medium of the storage cartridge (see

figs 1A, 1B, 1C, paragraphs 0078-0081, 0127-0138, 0183, 0193-0199, 0216-0220).

10.   As per claim 5, 22, 31, Shear et al teach a method wherein the coding key comprises a

seed value that is used to generate an additional key that is used to directly decode and encode

the data in the storage medium in the storage cartridge (see figs 1A, 1B, 1C, paragraphs 0078-

0081, 0127-0138, 0183, 0193-0199, 0216-0220).

11.   As per claim 6, 32, Shear et al teach a method further comprising: transmitting the

encrypted coding key to the interface device, wherein the interface device decrypts the coding

key to use to decode and code data stored in the storage medium (see figs 1A, 1B, 1C,

paragraphs 0078-0081, 0127-0138, 0183, 0193-0199, 0216-0220).

12.   As per claim 7, 33, Shear et al teach a method wherein encrypting the coding key further

comprises: encrypting the coding key with a first key, wherein a second key used by the interface

device is capable of decrypting the coding key encrypted with the first key (see figs 1A, 1B, 1C,

paragraphs 0078-0081, 0127-0138, 0183, 0193-0199, 0216-0220).

13.   As per claim 8, 34, Shear et al teach a method wherein encrypting the coding key further

comprises: encrypting the coding key with a first key, wherein a second key is capable of

decrypting the coding key encrypted with the first key; encrypting the second key with a third

key, wherein the interface device is capable of decrypting data encrypted with the third key; and

transmitting the coding key encrypted with the first key and the second key encrypted with the

third key to the interface device (see figs 1A, 1B, 1C, paragraphs 0078-0081, 0127-0138, 0183,

0193-0199, 0216-0220).

14.   As per claim 9, 35, Shear et al teach a method wherein encrypting the coding key further

comprises: encrypting the coding key with a first key, wherein a second key is capable of

decrypting the coding key encrypted with the first key; transmitting the coding key encrypted

with the first key to the interface device; receiving, from the interface device, the coding key

encrypted with the first key; decrypting the coding key with the second key; encrypting the

coding key with a third key, wherein a fourth key used by the interface device is capable of

decrypting data encrypted with the third key; and transmitting the coding key encrypted with the

third key to the interface device (see figs 1A, 1B, 1C, paragraphs 0078-0081, 0127-0138, 0183,

0193-0199, 0216-0220).

15.   As per claim 10, 23 and 36, Shear et al teach a method for accessing data in a removable

storage cartridge including a storage medium, comprising: receiving an encrypted coding key

from a host system; decrypting the encrypted coding key; using the coding key to encode data to

write to the storage medium; and using the coding key to decode data written to the storage (see

figs 1A, 1B, 1C, paragraphs 0078-0081, 0127-0138, 0183, 0193-0199, 0216-0220).

16.   As per claim 11, 37, Shear et al teach a method wherein encoding the data with the

coding key compresses the data and wherein decoding the data written to the storage medium

decompresses the data, and wherein the data can only be encoded or decoded using the coding

key (see figs 1A, 1B, 1C, paragraphs 0078-0081, 0127-0138, 0183, 0193-0199, 0216-0220).

17.   As per claim 12, 24, 38, Shear et al teach a method wherein the coding key is encrypted

by a first key maintained at the host system, further comprising; maintaining a second key that is

capable of decrypting data encrypted using the first key, wherein the second key is used to

decrypt the coding key encrypted with the first key (see figs 1A, 1B, 1C, paragraphs 0078-0081,

0127-0138, 0183, 0193-0199, 0216-0220).

18.   As per claim 13, 39, Shear et al teach a method wherein the second key is stored in an

integrated circuit non-volatile memory that is only accessible to decrypting logic that uses the

second key to decrypt data encrypted using the first key (see figs 1A, 1B, 1C, paragraphs 0078-

0081, 0127-0138, 0183, 0193-0199, 0216-0220).

19.   As per claim 14, 25, 40, Shear et al teach a method further comprising transmitting the

coding key decrypted using the decrypting logic to encoder/decoder logic, wherein the

encoder/decoder logic uses the coding key to encode and decode data to the storage medium (see

figs 1A, 1B, 1C, paragraphs 0078-0081, 0127-0138, 0183, 0193-0199, 0216-0220).

20.   As per claim 15, 26, 41, Shear et al teach a method comprising: storing the coding key

encrypted with the first key within the storage cartridge; receiving an input/output (I/O) request

directed to the storage cartridge; and accessing the encrypted coding key from the storage

cartridge, wherein the accessed coding key is decrypted using the second key, and wherein the

decrypted coding key is used to encode and decode data to execute the I/O request to the storage

cartridge (see figs 1A, 1B, 1C, paragraphs 0078-0081, 0127-0138, 0183, 0193-0199, 0216-

0220).

21.   As per claim 16, 42, Shear et al teach a method wherein the received encrypted coding

key is encrypted by a first key maintained at the host system, wherein the host system maintains

a second key that is capable of decrypting data encrypted using the first key, further comprising:

receiving, from the host system, the second key encrypted by the host system using a third key,

wherein data encrypted using the third key is capable of being decrypted using a fourth key;

accessing the fourth key; using the fourth key to decrypt the encrypted second key received from

the host system; and using the decrypted second key to decrypt the received coding key

encrypted using the first key (see figs 1A, 1B, 1C, paragraphs 0078-0081, 0127-0138, 0183,

0193-0199, 0216-0220).

22.   As per claim 17 and 43, Shear et al teach a method wherein the coding key is encrypted

by a first key maintained at the host system, wherein the host system maintains a second key that

is capable of decrypting data encrypted using the first key, further comprising: transmitting the

encrypted coding key received from the host system back to the host system; and in response to

transmitting the encrypted coding key back to the host system, receiving, from the host system,

the coding key encrypted using a third key, wherein data encrypted using the third key is

decrypted using a fourth key; and accessing the fourth key, wherein the coding key is decrypted

using the fourth key (see figs 1A, 1B, 1C, paragraphs 0078-0081, 0127-0138, 0183, 0193-0199,

0216-0220).

Response to Arguments

23.   Applicant's arguments with respect to claim 1-18,20-43 have been considered but are

moot in view of the new ground(s) of rejection in view of newly discovered reference O'Connor

et al. (US Patent 5,745,568).

Conclusion

24.   Applicant's amendment filed December 20, 2007 necessitated the new ground(s) of

rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See

MPEP §706.07(a). Applicant is reminded of the extension of time policy as set forth in 37

C.F.R. §1.136(a).

25.   A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 C.F.R.

§1.136(a) will be calculated from the mailing date of the advisory action. In no event, however,

will the statutory period for reply expire later than SIX MONTHS from the date of this final

action.

26.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to John M. Winter whose telephone number is (571) 272-6713. The

examiner can normally be reached on M-F 8:30-6, 1st Fridays off.

27.   If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Andrew Fischer can be reached on (571) 272-6779. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

28.   Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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